



Engineering, Operations, and Technology
Committee

Authorize Professional Services Agreement(s) for Desalination Technologies for Potential Water Supply Augmentation

Item 7-1

November 13, 2023

Item # 7-1 Professional Services Agreement(s) for Desalination Technologies for Potential Water Supply Augmentation

Subject

Authorize professional services agreements with: (1) AECOM Technical Services Inc. in an amount not to exceed \$660,000; and (2) CDM Smith Inc. in an amount not to exceed \$475,000, to perform water desalination studies in Metropolitan's service area.

Purpose

Increase Metropolitan's knowledge and inform CAMP4W

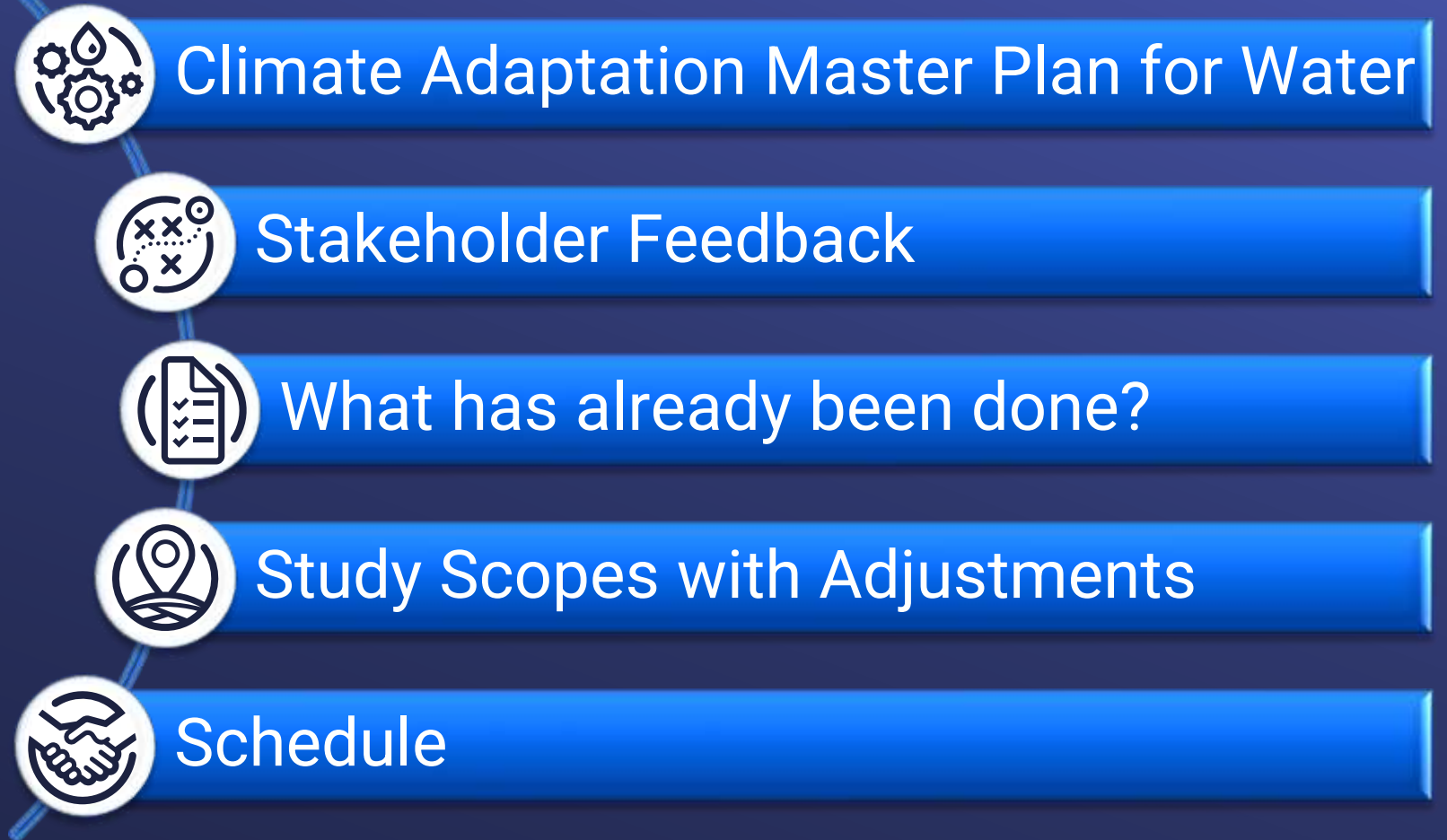
Recommendation and Fiscal Impact

Recommendation – Authorize professional services agreements with (1) AECOM Technical Services Inc. in an amount not to exceed \$660,000 and (2) CDM Smith Inc. in an amount not to exceed \$475,000, to perform water desalination studies in Metropolitan's service area.

Fiscal Impact – Expenditure of \$1,135,000 in budgeted funds

Budgeted

Overview



The Region Needs More Climate-Resilient Supplies

Climate Adaptation Master Plan for Water (CAMP4W)

Under rapid climate change scenarios, Southern California would need up to 300 TAF of new core supplies by 2032

Core Supply Needs in 2032 (TAF)			
IRP Scenario	No Storage	182 TAF Storage	364 TAF Storage
A	0	0	0
B	50	30	30
C	15	15	15
D	300	200	200

Source: CAMP4W Working Memorandum #4

Example Core Supplies

Conservation

Stormwater

Recycling

Desalination

Groundwater

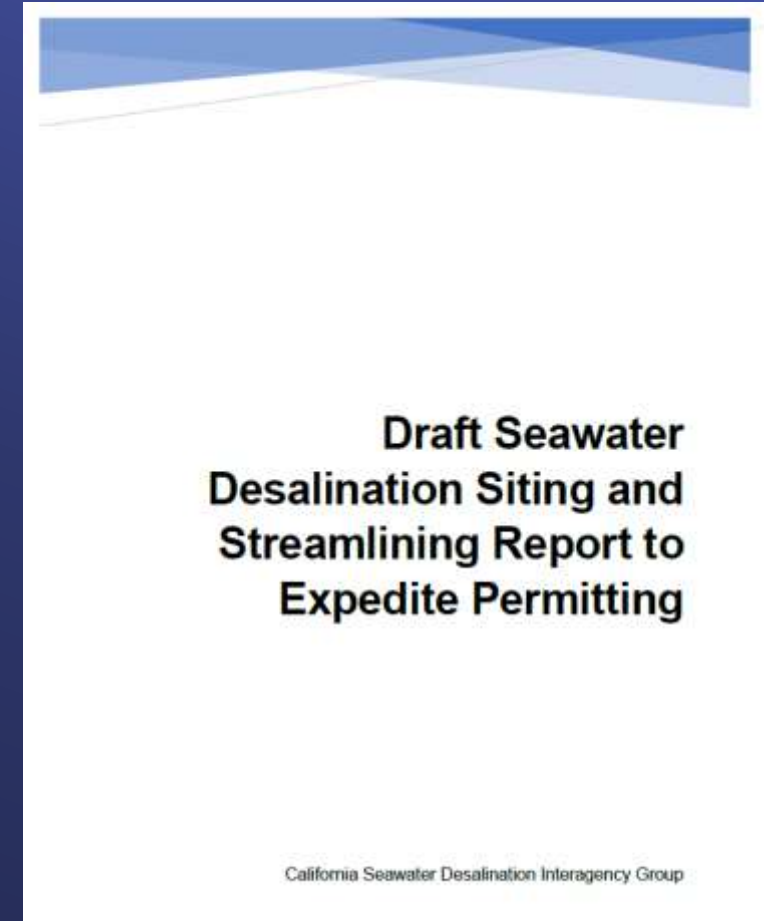
IID-MWD Agreement

Stakeholder Feedback

Background

Competitively
selected proposals
through RFP 1327

- June EOT Action Item Deferred
 - SWRCB Draft Siting Criteria Report
 - Environmental NGO input
- October EOT Information Item
 - Collect previous studies



Draft Siting Criteria

Timing:

- Released July 2023
- Final expected 2023 Q4



Slant Well Construction

Streamlined Track



Doheny Ocean Desalination Project

Concurrent review

Subsurface intakes

Comingled discharge

No impact on MPAs or SWQPAs

Coastal hazard prevention

Mitigation by project completion

Loading order

Environmental justice

What has already been done?

Brackish desalination

- Metropolitan
- USBR

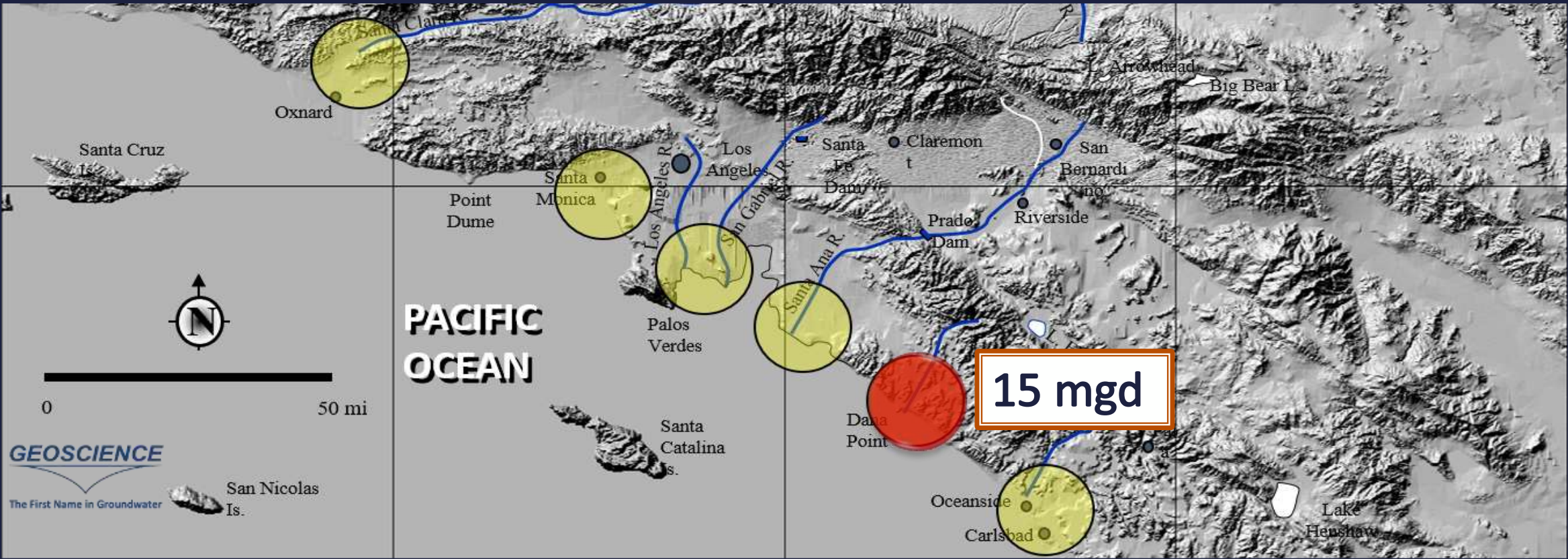
Seawater desalination

- Member agency
- State agency
- Metropolitan
- Offshore companies



Knowledge Gaps within Metropolitan's Service Area

Paleochannel locations suited for slant well technology



Source: Geoscience Presentation to CalDesal in 2020

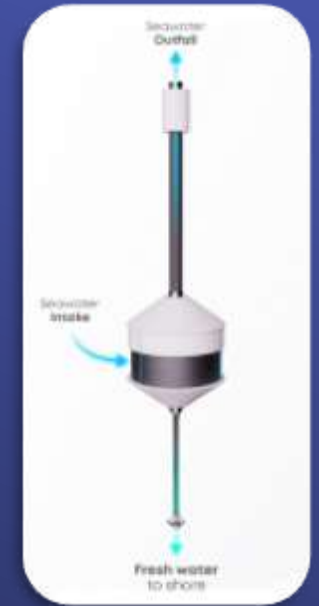
Opportunity to Explore New Approaches



- Singapore
- Keppel Marina East Desalination Project
- 30 MGD
- Brackish and seawater



- Horizontal Directionally Drilled Wells
- 34 MGD San Pedro Del Pinatar: Murcia Spain



- Las Virgenes MWD pilot study
- Subsea Seawater Desalination

New Agreement

- Competitively selected under RFP 1327
- SBE participation level – 25%
- NTE amount – \$660,000

AECOM Technical Services Inc.

Scope of work

- Task 1: Opportunities in Brackish Groundwater Desalination
 - Review of previous studies
 - Supply potential and conceptual costs for CAMP4W
 - Use of RCP 8.5
- Task 2: Project Implementation Options
 - Emphasize partnerships
- Task 3: Brackish Groundwater Desalination Technology Evolution

* Adjustments based on input received are in orange

New Agreement

- Competitively selected under RFP 1327
- SBE participation level – 25%
- NTE amount – \$475,000

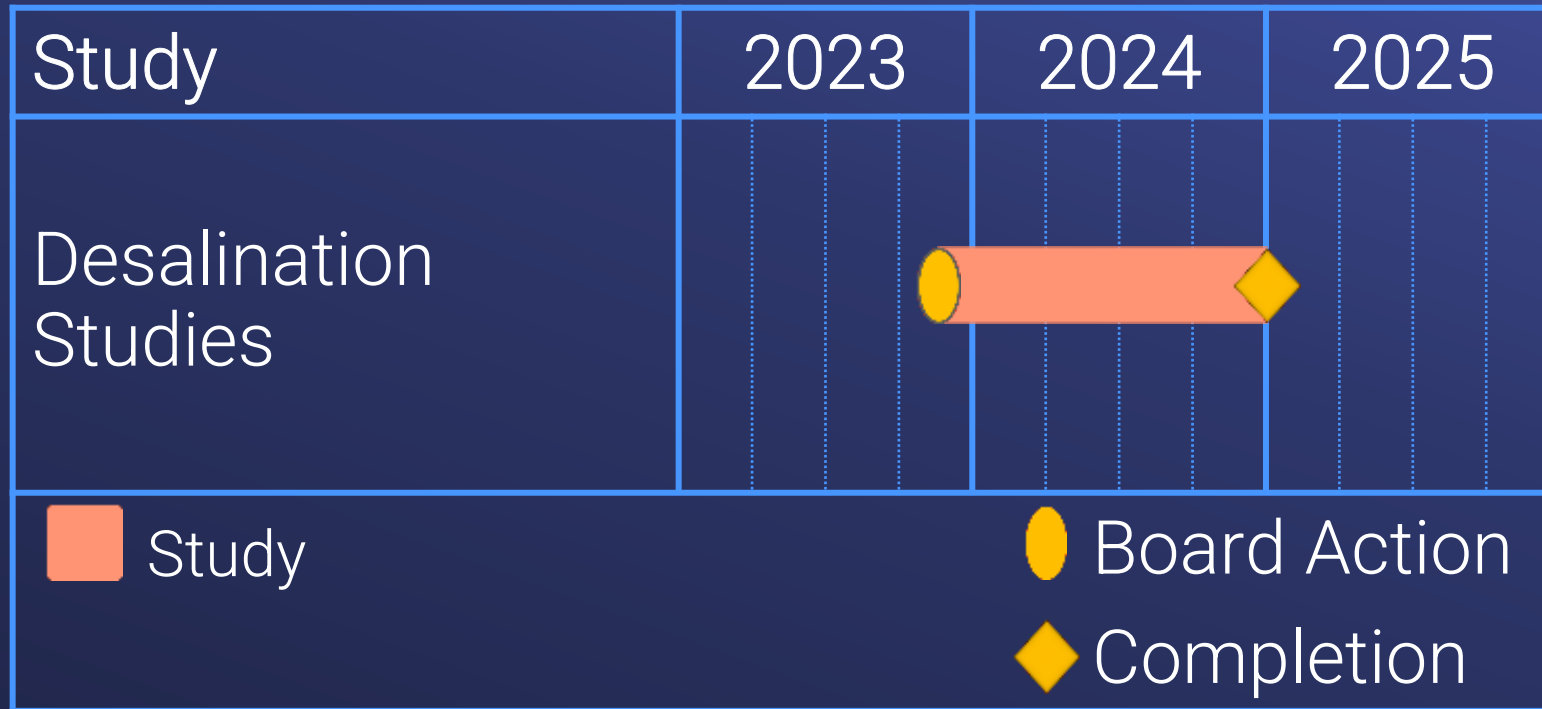
CDM Smith Inc.

Scope of work

- Task 1: Opportunities for Seawater Desalination
 - Review of previous studies
 - Prioritize State siting criteria and sub-surface intakes
 - Supply potential and conceptual costs for CAMP4W
 - Include offshore
- Task 2: Project Implementation Options
 - Emphasize partnerships
- Task 3: Emerging Technologies for Seawater Desalination
 - Include offshore

*Adjustments based on input received are in orange

Study Schedule



Board Options

- Option #1

Authorize professional services agreements with (1) AECOM Technical Services Inc. in an amount not to exceed \$660,000 and (2) CDM Smith Inc. in an amount not to exceed \$475,000, to perform water desalination studies in Metropolitan's service area.

Board Options

- Option #2

Authorize a professional services agreement with AECOM Technical Services Inc. only, in an amount not to exceed \$660,000, to perform a brackish water desalination study in Metropolitan's service area.

- Option #3

Authorize a professional services agreement with CDM Smith Inc. only, in an amount not to exceed \$475,000, to perform a seawater desalination study in Metropolitan's service area.

- Option #4

Do not proceed with either study at this time.

Staff Recommendation

- Option #1

